IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

PINPOINT INCORPORATED,	)	
	)	
Plaintiff,	)	
	)	
v.	)	No. 11 C 5597
	)	
HOTWIRE, INC.,	)	
	)	
Defendant.	)	

MEMORANDUM OPINION AND ORDER

Pinpoint Incorporated ("Pinpoint") brought this suit against Hotwire, Inc. ("Hotwire") for infringement of three patents: United States Patent No. 5,754,938 (the "'938 patent"), titled "Pseudonymous Server for System for Customized Electronic Identification of Desirable Objects"; United States Patent No. 7,853,600 B2 (the "'600 patent"), titled "System and Method for Providing Access to Video Programs and Other Data Using Customer Profiles"; and United States Patent No. 8,056,100 B2 (the "'100 patent"), titled "System and Method for Providing Access to Data Using Customer Profiles." Pinpoint alleges that Hotwire has infringed claim 1 of the '938 patent, claim 29 of the '600 patent, and claim 36 of the '100 patent. Generally, the patents involve recommendation systems that suggest goods or services based on customer characteristics (e.g., "if you like/bought/are *x*, you'll like *y*").

We held a pre-Markman hearing[1] in this case so that the parties could familiarize the court with the inventions and anticipated claim-construction disputes. The parties' presentations revealed that it would be prudent at this juncture to take briefs and rule on two issues: (1) whether the claims are invalid due to the indefiniteness of certain terms; and (2) if those claims are not invalid, whether they are limited to the mathematical constructs disclosed in the specifications.

DISCUSSION

A. Indefiniteness

1. "Most Closely Match"

Hotwire's first argument is that claim 29 of the '600 patent and claim 36 of the '100 patent are invalid for failure to meet the definiteness requirement of 35 U.S.C. § 112. Hotwire contends that the term "most closely match" in the '600 and '100 patents is a term of degree that is indefinite because neither the claims nor the specifications "provide a definitive standard or otherwise ascertainable metric for what constitutes 'most closely match.'" (Def.'s Opening Br. at 10.) According to Hotwire, "the only way to figure out the claimed scope and meaning of 'most closely match' is to guess." (Def.'s Opening Br. at 11.) Pinpoint concedes that

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[1/] A Markman hearing is conducted for the purpose of construing patent claims; the practice of holding such hearings has been common since the Supreme Court ruled in Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), that claim construction is a matter of law exclusively within the province of the court.

"most closely match" is a term of degree, but it asserts that the specification does provide an objective standard for determining what most closely matches and that a specific mathematical definition--a concrete number--is not required. Rather, it is left to a person of skill in the art to determine what is the appropriate compatibility threshold for the particular application. (Pl.'s Resp. at 8-11.)

Claim 29 of the '600 patent, with the relevant term and its context in italics, reads:

> A method of presenting data from a plurality of data objects, comprising the steps of:
>
> creating at least one customer profile for a customer, said customer profile indicating the customer's preferences for data having predetermined characteristics;
>
> creating content profiles for each of said data objects, said content profiles indicating at least one of the presence or the degree of content of said predetermined characteristics in data of each of said data objects;
>
> relating, using a microprocessor, said at least one customer profile with the content profiles for the data available from each data object;
>
> at a location remote from said customer, *determining a subset of said data objects having content profiles which are determined*, in said relating step, *to most closely match said at least one customer profile*; and
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> transmitting, via a data communication system, said determined subset of said data objects to said customer location for selection by said customer.

(Pl.'s Resp., Ex. B, '600 patent, col.54, ll.49-67 (emphasis added).)

Claim 36 of the '100 patent, with the relevant term and its context in italics, reads:

> A method for recommending one or more textual information items to customers from a content collection of textual information items and content profiles of said textual information items, said content profiles indicating the presence or absence or degree of presence or absence of one or more predetermined descriptive characteristics of said textual information items, the method comprising the steps of:
>
> creating one or more customer profiles with or without a customer explicitly expressing preference for said predetermined characteristics, said customer profiles representing the customers' preferences for said predetermined characteristics;
>
> storing said customer profiles in a memory in association with respective customer identifiers;
>
> retrieving a customer profile subsequently from said memory, by name or other customer identifier;
>
> *operating a computer* adapted by stored programming *to find a subset of said textual information items having content profiles that most closely match said customer profile*; and
>
> electronically sending said subset at least partly via a data communications network to said customer for selection.

(Pl.'s Resp., Ex. C, '100 patent, cols.53-54, ll.61-67, 1-16 (emphasis added).)

To be valid, a claim must "particularly point[] out" and "distinctly claim" the subject matter that the inventor regards as the invention. 35 U.S.C. § 112(b). "[T]he purpose of the definiteness requirement is to ensure that the claims delineate the scope of the invention using language that adequately notifies the

public of the patentee's right to exclude." Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citation omitted). Claims are indefinite only when they are "not amenable to construction" or "insolubly ambiguous." Id. The definiteness requirement does not compel absolute clarity; we ask whether the disputed term can be given "any reasonable meaning." Id. Whether a claim is invalid for failure to meet the definiteness requirement is a question of law. Young v. Lumenis, Inc., 492 F.3d 1336, 1344 (Fed. Cir. 2007). "Because a patent is presumed to be valid, the evidentiary burden to show facts supporting a conclusion of invalidity is one of clear and convincing evidence." Id. at 1345.

"Definiteness problems often arise when words of degree are used in a claim. That some claim language may not be precise, however, does not automatically render a claim invalid. When a word of degree is used the district court must determine whether the patent's specification provides some standard for measuring that degree. The trial court must decide, that is, whether one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification." Seattle Box Co. v. Indus. Crating & Packing, Inc., 731 F.2d 818, 826 (Fed. Cir. 1984); see also Datamize, 417 F.3d at 1350 ("[A] claim term, to be definite, requires an objective anchor."). "[C]laims are not indefinite merely because they present a difficult task of claim

construction. . . . if the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree," the claim is sufficiently clear to avoid invalidity on indefiniteness grounds. Halliburton Energy Servs., Inc. v. M-I LLC, 514 F.3d 1244, 1249 (Fed. Cir. 2008) (internal quotation marks and brackets omitted).

General principles of claim construction apply to indefiniteness challenges. Datamize, 417 F.3d at 1348. "It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004). The words of a claim are generally given their "ordinary and customary meaning," which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005). "[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Id. at 1313. In fact, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." Vitronics Corp. v.

Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). "Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean." Phillips, 415 F.3d at 1314 (internal quotation marks omitted). "Intrinsic evidence in the form of the patent specification and file history should guide a court toward an acceptable claim construction. And while the Federal Circuit has "emphasized the importance of intrinsic evidence in claim construction," it has "also authorized district courts to rely on extrinsic evidence, such as expert testimony." Datamize, 417 F.3d at 1348 (internal quotation marks omitted).

Pinpoint's initial argument in response is that Hotwire fails to meet its burden of demonstrating indefiniteness because it offers no evidence regarding how a person of skill in the art would construe the term "most closely match." We do not regard Hotwire's lack of *extrinsic* evidence as fatal to its argument; it relies on *intrinsic* evidence--the patent specifications--and Pinpoint cites no case law indicating that extrinsic evidence is always required in order to prevail on an indefiniteness challenge.[2]

[2/] Pinpoint cites Source Search Technologies, LLC v. LendingTree, LLC, 588 F.3d 1063 (Fed. Cir. 2009) for its contention that "bald attorney argument" regarding the intrinsic evidence, without the presentation of expert testimony, is always insufficient to prove indefiniteness. (Pl.'s Surreply at 3.) The

That said, we agree with Pinpoint that the intrinsic evidence actually contradicts Hotwire's argument; the specifications here do supply an objective standard for determining when a content profile "most closely match[es]" a customer profile. The specification of the '600 patent discloses a preferred embodiment that includes an "agreement matrix determining step," which compares the customer profiles with the content profiles. ('600 patent, col.6, ll.1-5.) It is further explained that this step "preferably comprises the step of determining a distance in multidimensional characteristic space between a customer profile and a content profile by calculating an agreement scalar for common characteristics, ac, between the customer profile, cv, and the content profiles, cp in accordance with the relationship: $ac_{ij}=1/[1+\Sigma_k w_{ik}|cv_{ik}-cp_{jk}|]$ . . . ." ('600 patent, col.6, ll.6-12.) Each part of this equation is particularly described, and the specification then states:

> As will be appreciated by those skilled in the art, an agreement matrix so defined is the reciprocal of the distance d (=1/ac) in multi-dimensional space between the customer profile vector and the content profile vector and that many difference distance measurement techniques may be used in determining the distance d. In such an embodiment, the subset determining step preferably comprises the steps of sorting the video programs in an order of ac indicating increasing correlation and *selecting as the subset a predetermined number of the*

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attorneys' argument in that particular case was not good enough, but Source Search does not stand for the broader proposition that the proponent of an indefiniteness argument must submit expert testimony in order to prevail. The Federal Circuit's language in Datamize is instructive: it stated in that case that intrinsic evidence "should guide" a district court toward an acceptable claim construction and that the court is "authorized" to also rely on extrinsic evidence. 417 F.3d at 1348. The implication is that extrinsic evidence is not necessarily required as a basis for a finding of indefiniteness.

> *video programs having the values for ac indicating the most correlation*.

('600 patent, col.6, ll.19-29 (emphasis added).) Furthermore, in the section of the patent titled "Detailed Description of the Presently Preferred Embodiments," the calculation of the agreement matrix is described in detail, and it is explained that "[o]nce the agreement matrix has been generated, those programs with the highest values for ac, i.e., the closest distance (1/ac) and hence closest match to the customer's profile or profiles, are prioritized and selected for presentation . . . ." ('600 patent, col.25, ll.64-67.) The '100 patent uses this same language that provides an objective standard for determining which customer and content profiles "most closely match." ('100 patent, col.6, ll.18-28; col. 25, 11.15-18.)

Hotwire emphasizes the fact that the specification does not provide a specific number or cutoff for measuring exactly which profiles "most closely match," relying on the Court's statement in Datamize, 417 F.3d at 1350, that the "scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention." (Def.'s Reply at 5.) But as we have discussed, the claims at issue do not depend *solely* on the person of skill in the art; the specifications contain an "objective anchor." Datamize, 417 F.3d at 1350. We do not read the Federal Circuit case law cited by the parties as requiring that the specification provide a precise

compatibility threshold; it will vary depending on the particular application. In Source Search Technologies, LLC v. LendingTree, LLC, 588 F.3d 1063 (Fed. Cir. 2009), the Court addressed a similar issue. The defendant argued that the lower court's construction of the term "goods or services" as "standardized articles of trade and performances of work for another" was indefinite because a person practicing the claimed invention would not be able to differentiate between "standard" and "non-standard" "goods or services." The Court rejected the argument, reasoning as follows:

> Of course a person wishing to practice the invention will not know the exact terms of the "good or service" until the specific market or network is chosen. Upon that choice, however, the "good or service" comes into clear focus. To hold otherwise would require the patent to list every possible good or service. This court does not load the indefiniteness requirement with this unreasonable baggage. Although at times difficult to determine the bounds of a "standard" product or service, a person having ordinary skill in the art will possess an understanding of the system that will supply an objective definition to the various markets and applications of the system. This court does not judge indefiniteness according to the subjective impressions of any particular user of the system, as [defendant] urges. Instead, this court measures indefiniteness according to an objective measure that recognizes artisans of ordinary skill are not mindless automatons. From that vantage point, a skilled artisan will understand the markets and the system enough to determine what is a "standard" item.

588 F.3d at 1076-77 (citations and some internal quotation marks omitted); see also Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 655 F.3d 1364, 1373-74 (Fed. Cir. 2011) (affirming the validity of a claim providing for a tobacco-curing method in a "controlled environment" that did not specify exact numbers for

various parameters for that environment, such as humidity and temperature, and noting that exact numbers were not required because curing conditions vary "during any given cure").

The specifications provide an objective anchor for the term "most closely match," and Hotwire offers no evidence indicating that one of ordinary skill in the art would not understand what is claimed when the term "most closely match" is read in light of the specification. Accordingly, we find that the term "most closely match" is not indefinite.

2. "Retrieved in Said Step of Enabling Access"

Hotwire maintains that the term "retrieved in said step of enabling access" that appears in claim 1 of the '938 patent is also indefinite. Claim 1 of the '938 patent, with the relevant term and its context in italics, reads:

> A method for automatically providing a user with confidential access to selected ones of a plurality of target objects and sets of target object characteristics that are accessible via an electronic storage media, where said users are connected via user terminals and data communication connections to a target server system which accesses said electronic storage media, said method comprising the steps of:
>
> confidentially generating a user pseudonym at a proxy server, which pseudonym is unique to said user, by means of authenticated user credentials provided by an authenticating entity;
>
> mapping a user target profile interest summary indicative of said user's access patterns to target objects and sets of target object characteristics to said user pseudonym;
>
> enabling access by said user to said plurality of target objects and sets of target object characteristics stored

> on said electronic storage media via said user target profile interest summary associated with said user's pseudonym; and
>
> confidentially routing target objects and sets of target object characteristics, *retrieved in said step of enabling access*, to said user.

(Pl.'s Resp., Ex. A, '938 patent, cols.78-79, ll.63-67, 1-19 (emphasis added).) In Hotwire's view, the term is indefinite because it lacks an antecedent basis in that the prior "enabling access" step does not disclose the retrieval of any target objects or the scope of that retrieval; therefore, the meaning of the term is not reasonably ascertainable. (Def.'s Opening Br. at 13.) Pinpoint argues that the term has an explicit antecedent basis on the face of the claim, the "enabling access" step does disclose which target objects are to be retrieved, and nothing in the claims requires the retrieval of any specific objects or specific percentages or numbers of objects because the invention is applicable to multiple industries. (Pl.'s Resp. at 12-13.)

"The requirement of antecedent basis is a rule of patent drafting, administered during patent examination." Energizer Holdings, Inc. v. Int'l Trade Comm'n, 435 F.3d 1366, 1370 (Fed. Cir. 2006). "[T]he failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite." Bose Corp. v. JBL, Inc., 274 F.3d 1354, 1359 (Fed. Cir. 2001) (quoting U.S. Pat. &

Trademark Office, Manual of Patent Examining Procedure ("MPEP") § 2173.05(e) (6th ed. Rev.1, Sept. 1995)). "[A]n antecedent basis can be present by implication." Energizer Holdings, 435 F.3d at 1371.

Hotwire is correct that the "enabling access" step of claim 1 does not expressly mention "retrieval." But it fails to persuade us that the meaning of the term "retrieved in said step of enabling access" is not reasonably ascertainable by those skilled in the art, or even by those not skilled in the art. In support of its argument, Hotwire refers only to the claim and the specification. We agree with Pinpoint that Hotwire is attempting to inject ambiguity where none exists and that Hotwire's professed confusion about the term does not square with what is disclosed in the specification. Hotwire argues that the "retrieval step serves the specific purpose of identifying relevant or interesting objects for a user." (Def.'s Opening Br. at 14.) But the retrieval "in said step of enabling access" is different from the "retrieval" to which Hotwire refers. The specification teaches a process that involves *two* stages of selection of target objects: one by the system and one by the user. ('938 patent, col.5, ll.13-18 ("The system then evaluates the target profiles against the users' target profile interest summaries to generate a user-customized rank ordered listing of target objects most likely to be of interest to each user so that the user can select from among these potentially

relevant target objects, which were automatically selected by the system from the plethora of target objects available on the electronic media.".) The preferred embodiment of the invention is an "on-line news clipping service," col.7 l.47, which the specification describes in detail, cols.55-61. Under the heading "Present List of Articles to User," it is described in column 58 how the news-clipping service identifies relevant articles and how a user can then retrieve the articles he wishes to review. ('938 patent, col.58, ll.20-49.) Figure 10 of the patent drawings illustrates the process. The specification also describes the scope of the user's retrieval (it depends on what the user selects) and how the system generates a list of relevant objects (the profile correlation step) as well as where the data used at various points in the process are stored.

When the elements of claim 1 are read together in conjunction with the specification, it becomes clear that the term "retrieved in said step of enabling access" does have an antecedent basis. In the "mapping" step of claim 1, the system winnows the universe of target objects to those target objects that are relevant to the user, by comparing a user target profile interest summary with target profiles for each target object. In the "enabling access" step, it is implied that the user can retrieve objects from the list of relevant objects, and in the "confidentially routing" step, these objects are sent to the user. Claim 1 does not describe this

process using the exact words used in the specification, but "[t]here is no requirement that the words in the claim must match those used in the specification disclosure." In re Skvorecz, 580 F.3d 1262, 1268-69 (Fed. Cir. 2009) (quoting MPEP § 2173.05(e)). We find that the term "retrieved in said step of enabling access" is not indefinite.

B. The Disclosed Mathematical Constructs

Hotwire contends that in the event that we reject its indefiniteness arguments, we should construe certain claim terms as being "limited to the mathematical constructs disclosed in the patents." (Def.'s Opening Br. at 17.) The parties propose the following constructions:

The '600 and '100 patents

	Hotwire's proposal	Pinpoint's proposal
"customer profile"	using one or more disclosed mathematical constructs to quantitatively represent certain characteristics of a customer	a set of information related to a specific customer that describes characteristics of the customer
"content profile"	using a disclosed mathematical construct to quantitatively represent certain characteristics of a data object	a profile that describes characteristics about content
"relating, using a microprocessor, said at least one customer profile with the content profiles for the data available from each data object" ('600 patent)	using a disclosed mathematical construct to establish, using a microprocessor, a logical connection between a customer profile and a content profile based on the relative closeness of the customer profile with the content profile	establishing a logical or causal connection [regarding the term "relating"]

The '938 patent

	Hotwire's proposal	Pinpoint's proposal
"target profile interest summary"	using a disclosed mathematical construct to quantitatively represent the target object characteristics that a user likes and/or dislikes	a summary of digital profiles of target objects that a user likes and/or dislikes

Hotwire's argument is based on a claim-construction ruling issued by Judge Posner, sitting on the district court by designation, in Pinpoint, Inc. v. Amazon.com, Inc., 369 F. Supp. 2d 995 (N.D. Ill. 2005), regarding United States Patent No. 5,758,257 (the "'257 patent"), which is an ancestor patent of the three patents-in-suit. The '257 patent is titled "System and Method for Scheduling Broadcast of and Access to Video Programs and Other Data Using Customer Profiles." In Amazon.com, Judge Posner construed the '257 patent's terms "customer profile" and "content profile" to mean "mathematical constructs" of, respectively, customer preferences and program contents. 369 F. Supp. 2d at 1001-02. He explained that no non-quantitative characterization, definition or expression of such preferences and contents is described in the specification. Id.

In its opening brief, Hotwire asserts that because Judge Posner "interpreted the same or similar terms in the prior *Amazon.com* litigation," Pinpoint "is now bound by those constructions" because it "participated in that litigation."

(Def.'s Opening Br. at 19.) Aside from a parenthetical citation, Hotwire does not expressly use the term "issue preclusion" (or its equivalent, "collateral estoppel") in its opening brief, yet that is the doctrine it seems to be urging us to apply. We understand why Hotwire may be avoiding the term; it would have to demonstrate that all of the elements of the doctrine are satisfied here. In the Seventh Circuit, the party seeking application of the doctrine has the burden of establishing four elements: (1) the issue sought to be precluded is the same as that involved in the prior action; (2) the issue was actually litigated; (3) the determination of the issue was essential to the final judgment; and (4) the party against whom estoppel is invoked was fully represented in the prior action. La Preferida, Inc. v. Cerveceria Modelo, S.A. de C.V., 914 F.2d 900, 906 (7th Cir. 1990).[3] Pinpoint argues that Hotwire cannot establish all of these elements, in particular the first and second elements, because the issues in the cases are different. Although Judge Posner construed terms from related patents, the constructions were based on different claim language and context. Moreover, no final judgment was entered in Amazon.com; shortly after Judge Posner issued his claim-construction opinion, the parties stipulated to a dismissal of the claims and counterclaims.

In reply, Hotwire does not address the elements of collateral

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[3/] Because the application of collateral estoppel is not a matter within the exclusive jurisdiction of the Federal Circuit, we apply the law of the circuit in which this court sits. See Vardon Golf Co. v. Karsten Mfg. Corp., 294 F.3d 1330, 1333 (Fed. Cir. 2002).

estoppel or the substance of Pinpoint's argument concerning the application of the doctrine, nor does it attempt to demonstrate that the elements of the doctrine are satisfied. Instead, Hotwire argues that we should apply the doctrine of stare decisis (which is more flexible than collateral estoppel). But "a district court decision does not have stare decisis effect; it is not a precedent." Midlock v. Apple Vacations W., Inc., 406 F.3d 453, 457 (7th Cir. 2005). The Amazon.com decision might be relevant to the construction of the related claim terms here, and we ultimately find it helpful and persuasive, but it is not binding.

We note at the outset that Hotwire, throughout its briefs, has improperly conflated two issues: (1) whether the claims are limited to mathematical constructs, as Judge Posner held in regard to the ancestor patent; and (2) whether the claims are limited to only those mathematical constructs that are disclosed in the specifications--the algorithms--an issue that Judge Posner did not address.

We have had to tease apart Hotwire's arguments in order to properly analyze these separate issues, the second of which is easier to tackle. The only specific support Hotwire offers for its argument that the disputed claim terms are limited to the mathematical constructs that are disclosed in the specifications is on pages 26 and 27 of its opening brief. In connection with the "relating . . . said at least one customer profile with the content

profiles" term, Hotwire contends that the "most telling evidence that this step must be limited to the disclosed mathematical constructs is the sworn statement by the inventors provided during prosecution to overcome prior art." (Def.'s Opening Br. at 26.) The statement is as follows: "We propose an algorithm for scheduling the broadcast of movies and other shows over a television network which allows the simultaneous distribution of many channels to many viewers, such as a cable system. This algorithm is based on an 'agreement matrix' characterizing the attractiveness of each movie to each prospective viewer." (Def.'s Opening Br., Ex. G, Excerpts from '100 Patent File History, Ex. A to Supplemental Rule 131 Dec. at 32, Bates No. Pinpoint004801.)

Hotwire neglects to mention the language immediately following the above-quoted statement in the prosecution history of the '100 patent: "A broadcast schedule is generated which is designed to produce the greatest total viewer satisfaction. A specific algorithm is provided to demonstrate how this has been reduced to practice, but this patent is intended to include the broader class of methods. The agreement matrix may be produced as described in [the patent] or may produced by another algorithm." (Def.'s Opening Br., Ex. G, Excerpts from '100 Patent File History, Ex. A to Supplemental Rule 131 Dec. at 32, Bates No. Pinpoint004801.)

Other than the statement it takes out of context, Hotwire offers nothing to support its narrow construction of the disputed

claim terms. There simply is nothing in the claims or the specifications of any of the three patents-in-suit that indicates that the disputed terms are limited to those mathematical constructs disclosed in the specifications. The specific mathematical constructs discussed in the patents are examples presented within the preferred embodiments, and Hotwire's position ignores one of the Federal Circuit's principles of claim construction. That Court has "noted the danger of reading limitations into the claims from the preferred embodiments," stating that although a specification "may well indicate that certain embodiments are preferred, particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments." Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 1362 (Fed. Cir. 2000). We reject Hotwire's contention that the patents-in-suit are limited to the specific algorithms disclosed in the specifications.

Pinpoint's proposed constructions, however, are too broad. This brings us back to the first issue, the one Judge Posner addressed: whether the methods claimed are limited to the use of mathematical constructs (in general, not just the particular ones disclosed in the specifications). Judge Posner construed the terms "customer profile" and "content profile" in the '257 patent to mean mathematically-expressed customer preferences and mathematically-expressed program contents. He reasoned that whenever the terms

were used in the patent, they referred to mathematical constructs only--the content and customer profiles in the specifications included only characteristics with quantifiable values. Amazon.com, 369 F. Supp. 2d at 1001-02.

The same is true with respect to the disputed terms from the '600, '100, and '938 patents. As Hotwire points out, the inventions are described in the '600 and '100 patents as relating to "a customer profile system in which the characteristics of a data source are *quantified* in some objective manner and stored as content profiles and the customer's preferences for those characteristics are stored in the form of one or more customer profiles." ('600 patent, col.9, ll.43-47; '100 patent, col.9, ll.40-44 (emphasis added).) The preferred embodiment is described as follows:

> [T]he content profiles describe the contents of video programs and are compared mathematically in a computer to customer profiles to generate an agreement matrix which establishes the degree of correlation between the preferences of the customer or customers and the video programming available during each video programming time slot. The content profiles and the customer profiles are thus described as a collection of mathematical values representing the weighted significance of several predetermined characteristics of the video programming. For ease of description, the present inventors will describe the mathematical basis for the content profiles and the customer profiles in this section and will describe the generation of the agreement matrix and the uses of the agreement matrix in the next section.

('600 patent, col.10, ll.18-31; '100 patent, col.10, ll.14-27.) As with the '257 patent, whenever the terms "customer profile" and

"content profile" are used in the '600 and '100 patents, they always mean mathematical, quantitative constructs of customer characteristics and content characteristics. There is no explanation of a customer profile or a content profile that is *not* a mathematical construct or quantifiable value.

Pinpoint focuses, as it did in Amazon.com, on the claim language that distinguishes between "presence" and "degree" of a characteristic. With regard to content profiles, the claims at issue refer to "the presence or absence or degree of presence or absence" of one or more descriptive characteristics ('100 patent) and "at least one of the presence or the degree of content of" the characteristics ('600 patent). Pinpoint argues that because the claims refer to "presence *or* degree," "the asserted claims are clearly void of a mathematical construct." (Pl.'s Resp. at 20.) Similarly, argues Pinpoint, a customer profile "simply indicate[s]" information about a customer such as a "like" or "dislike" or a zip code. (Pl.'s Resp. at 26-27.) Judge Posner rejected this argument:

> Pinpoint's underlying idea is that you use math only to indicate variation, not mere presence or absence. Yet the content and customer profiles in *all* the specifications include characteristics with quantifiable values. And it is apparent from the abstract of the 722 patent that that patent, like the 257 patent, envisages profiles and an agreement matrix in which degree as well as presence figures, with degree measured quantitatively rather than qualitatively (as in 100F versus "hot"). For it states that "from these profiles, an 'agreement matrix' is calculated by comparing the recipient's profiles to the actual profiles of the characteristics of

> the available video programs, movies, or other data. . . ."
>
> Had Pinpoint wanted to claim a simple matching system, in which, for example, a customer is asked what type of movie he prefers as between romantic and violent, and an expert is asked to classify movies as either romantic or violent, and the customers who prefer romantic get recommended the movies that the expert has classified as romantic and the ones who prefer violent get the ones the expert has classified as violent, it could have said so. But so simple a matching system, as we know, would be obvious on the basis of the prior art, such as the Strubbe patent. That is why the preamble, abstract, background, and claims sections of the patent describe an invention that schedules video or other programs in particular time slots and decides what to schedule for particular viewers by ingeniously attaching numerical weights to program characteristics and customer preference for such characteristics (in particular time slots) so that matches can be determined with greater precision than if a purely verbal comparison were used.

369 F. Supp. 2d at 1002-03. When the specifications refer to presence or absence of characteristics in a profile or a "like" or "dislike," it is within a discussion of *weighting* techniques and calculations, which are mathematical. When the specifications refer to the use of a zip code for a customer profile, they do not contemplate actually using the zip code itself in the calculation. Rather, they state that the "initial customer profile may be assigned *on the basis of* the customer's zip code" and that it "may be set to a profile *typical of* the customer's zip code area." ('600 patent, col.12, ll.3-4, 6-7; '100 patent, cols.11-12, ll.65-66, 1-2 (emphasis added).) The content profiles and customer profiles "indicate" information about content and customers by using quantifiable values.

Pinpoint invokes the doctrine of claim differentiation, which "stems from the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope." See Seachange Int'l, Inc. v. C-COR Inc., 413 F.3d 1361, 1368 (Fed. Cir. 2005). It contends that because claim 48 of the '600 patent uses the language "expressing the content profile in mathematical terms" when claims 45 and 46 refer to "creating a content profile indicative of characteristics" and "creating a content profile indicating a degree," we should not construe the term "content profile" to require a mathematical construct because that would render superfluous the term "mathematical" in claim 48 and therefore render "wholly irrelevant" claim 48. (Pl.'s Resp. at 22-23.) We are unpersuaded. Claim 48 refers to the action of "expressing" a content profile in mathematical terms, while the other claims refer to "creating" a content profile. It does not render claim 48 superfluous to construe a content profile as being a mathematical construct; a claim to the *creation* of a mathematically-expressed set of program contents is different from a claim to the *expression* of that set in mathematical terms.

The "relating" step of claim 29 of the '600 patent also requires the use of mathematical constructs. (We agree with Pinpoint that the term "relating" requires interpretation, but that the rest of the phrase--"using a microprocessor, said at least one

customer profile with the content profiles for the data available from each data object"--does not. Given that we have construed the terms "content profile" and "customer profile," there is nothing ambiguous about the phrase except for the term "relating.") Hotwire argues that the modifier "using a microprocessor" "leaves no doubt that" the "relating" step is a mathematical process. (Def.'s Opening Br. at 25.) We think that it is strong evidence of such a limitation. Pinpoint's response is that a microprocessor can be, and is routinely, "used for simple logic" or for performing "non-mathematical step-by-step algorithms," Pl.'s Resp. at 32-33, but no system is described in the patent that uses "step-by-step algorithms" as opposed to mathematical ones, nor can the correlation described therein be called "simple logic." The specification indicates that the correlation step involves a number of mathematical processes. The invention summary explains that an "agreement matrix" is developed that characterizes "the attractiveness of each available source of video programming or data to each customer." ('600 patent, col.4, ll.36-38.) It also provides that an "agreement matrix relating the customer profiles with the content profiles is [] generated." ('600 patent, col.5, ll.19-21.) Pinpoint fails to explain how a "matrix," a mathematical construct, can be generated other than through a method that uses mathematical formulas. The specification further describes the "relating" step with respect to the preferred

embodiment: "[T]he content profiles describe the contents of video programs and are compared mathematically in a computer to customer profiles to generate an agreement matrix which establishes the degree of correlation between the preferences of the customer or customers and the video programming available during each video programming time slot." ('600 patent, col.10, ll.18-23.) An entire section is devoted to the "Calculation of Agreement Matrix," which provides in part:

> The calculated agreement scalars, ac, form an agreement matrix, AC, which provides measurements of the similarity between the customer profiles and the content profiles. Its calculation incorporates the desired amounts of the various characteristics used to define the programs, their importance (weights) to each customer, and the amounts of these characteristics present in each program as determined by experts or test groups.

('600 patent, col.19, ll.21-28.)

As for the term "target profile interest summary," Pinpoint contends that the '938 patent provides an explicit definition that we should adopt: "a summary of digital profiles of target objects that a user likes and/or dislikes." ('938 patent, col.4, ll.54-56.) Hotwire responds that the word "summary" needs further explanation, which is supplied by the specification and indicates that a mathematical construct is required. We agree. The specification recites that the "target profile interest summary describes the user's interest level in various types of target objects," '938 patent, col.1, ll.25-26, and that "the user's interest in a target object is defined to be a numerical

measurement of the user's relative desire to locate that object rather than others," '938 patent, col.9, ll.56-58. Moreover, the '938 patent does not teach a "target profile interest summary" that is not a mathematical construct.

CONCLUSION

We find that the terms "most closely match" in the '600 and '100 patents and "retrieved in said step of enabling access" in the '938 patent are not indefinite. We also find that the terms "customer profile," "content profile," "relating," and "target profile interest summary" in the patents-in-suit are not limited to the specific algorithms disclosed in the specifications, but that they are limited to mathematical constructs. A status hearing is set for April 3, 2013 at 11:00 a.m. to set a date for a Markman hearing.

DATE: March 20, 2013

ENTER:

John F. Grady, United States District Judge